

COVID-19
HEALTH CARE SYSTEM
MITIGATION PLAYBOOK

California Department of Public Health



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I. PURPOSE AND BACKGROUND

The purpose of this mitigation playbook is to provide a summary for a mitigation strategy in the State of California and the health care system. Each of the items listed in this playbook should have detailed operational plans to support them.

Novel Coronavirus (COVID-19)

The family of coronaviruses has been around for some time. Coronavirus Disease 2019, or COVID-19, the cause of the current outbreak that originated in China is a new member of this coronavirus family. CDC has assigned a scientific name to the virus, SARS-CoV-2.

The most common symptoms of COVID-19 include fever, cough, and respiratory symptoms. It is believed that most people – more than 80% – have moderate to no symptoms, while others experience a more complicated disease course, including pneumonia. COVID-19 appears to be more severe in older individuals and those with underlying chronic illnesses. Children seem to be less affected. Much is still to be determined about the virus, but based on multiple early reports, here are key characteristics of COVID-19 infection:

- **Incubation Period:** Estimated to be 2-14 days.
- **Mode of Transmission:** Evidence is building. Systems should ensure appropriate PPE is available for most critical patients where procedures occur frequently. Reports from around the world indicate most infections have occurred when a contagious individual has close contact with family, colleagues, or healthcare workers due to droplets which can spread up to 6 feet. Some evidence of spread has occurred through contact with surfaces contaminated with droplets, but this does not appear to be the primary mode of spread. Because the virus has been isolated in stool, there is concern for spread through the fecal-oral route, including use of shared toilets in congregate settings, but more data is needed on this. Similarly, there are some concerns about airborne transmission, but more data is needed on this.
- **Transmissibility:** The R_0 is estimated to be between 2-4, depending on the cohort studied. This means that one infected person will *on average* spread the virus to 2-4 individuals.
- **Severity:** 80% of individuals with documented COVID-19 disease have a milder spectrum of asymptomatic to moderate illness. Different reports estimate the mortality rate to be between 2-3%. The mortality rate may be lower since asymptomatic individuals are less likely to seek care and get tested.
- **Convalescence:** The period after which an individual is clinically recovered and no longer capable of transmitting the virus is still to be determined. CDC has stated that viral shedding may occur for 15-30 days after onset of infection.

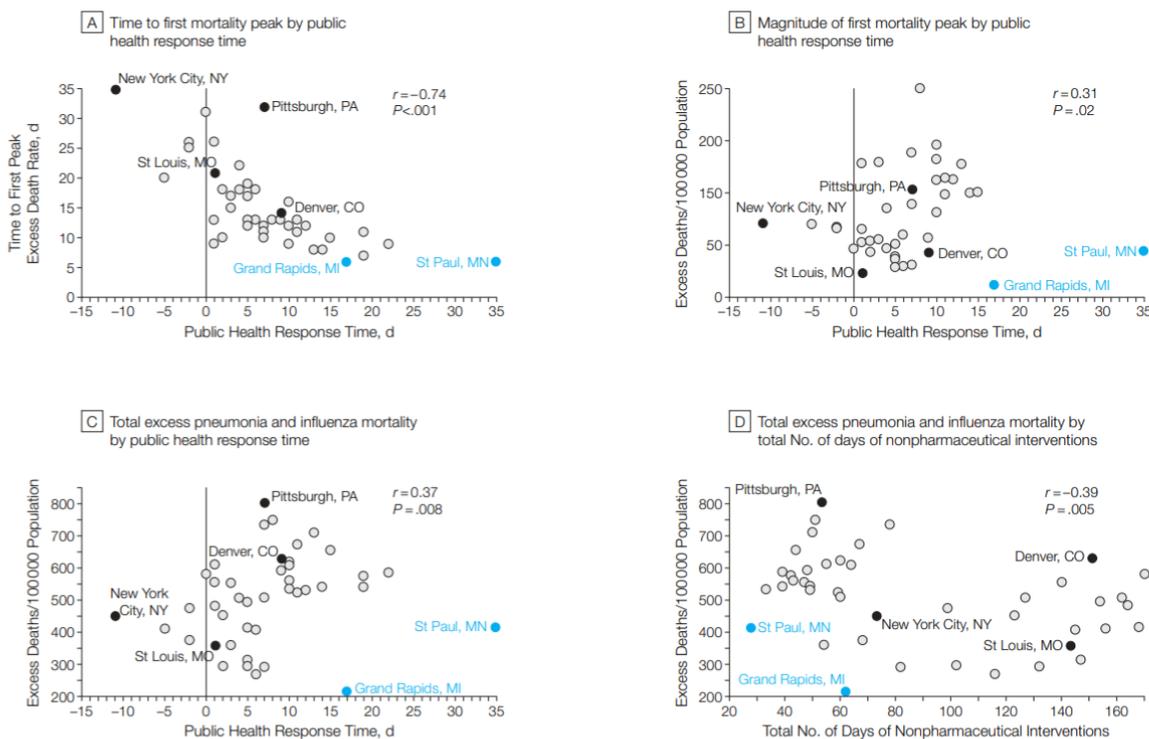
Pandemic Response Phases

In the early stages of a pandemic, key strategies include detecting cases using routine surveillance and epidemiologic investigations. As continued clusters of cases are identified and there is confirmation of human-to-human transmission in a given country, non-impacted countries attempt to contain the outbreak and limit any potential spread. This includes travel restrictions, screening, quarantine of any exposed individuals, and isolation of anyone who becomes ill. As continued implementation of case-based control measures becomes less effective, community interventions are used to limit the spread of disease in local geographic areas, including social distancing actions such as school closures or cancellation of events.

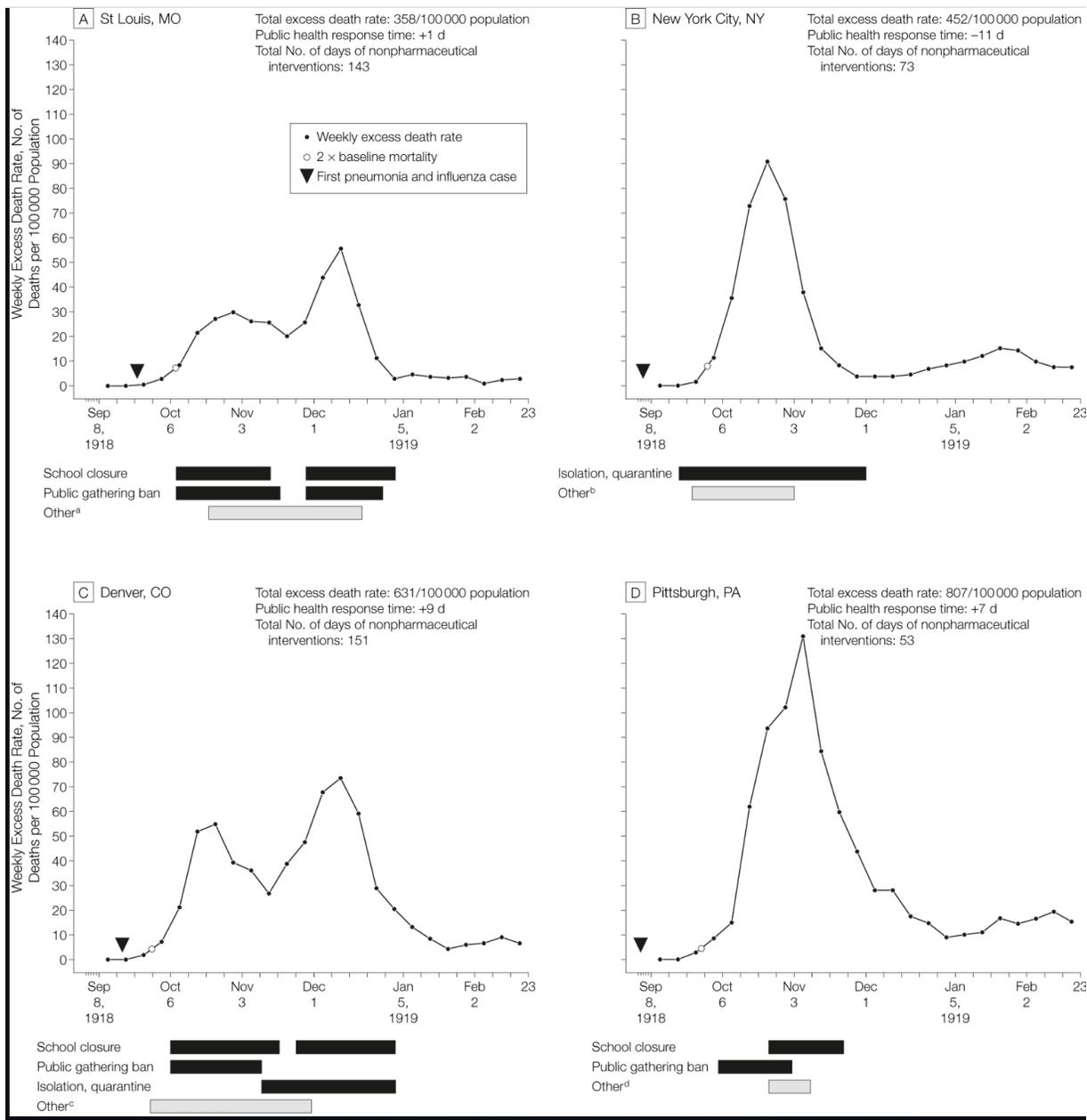
In a state as large as California, the transition from containment to mitigation phase is not homogenous. While many California communities are still working through containment-mitigation strategies, other communities are already in the mitigation phase due to widespread community transmission of COVID-19. Now that California has documented community spread and is progressing to the peak of the pandemic, disruption across social, economic, community and health care delivery environments will occur. California is now in a position where preparation of the healthcare system is essential and should not wait for the rapid surge in COVID-19 cases.

Cases are quickly increasing in multiple communities across the state, and there is a narrow window (7-10 days) in which to aggressively implement community interventions (closing schools, canceling large gatherings, and social distancing) in order to bend the epidemiologic curve or stretch it out. If aggressive community intervention actions are delayed, the interventions will have low or no impact. Studies^{1,2} analyzing U.S. major city interventions and mortality rates from the Influenza Pandemic of 1918 clearly show that cities who delayed implementing early, aggressive community interventions suffered greatly, with substantially higher mortality. Even worse, those cities then suffered both the widespread illness *and* the burden of aggressive social distancing measures which were too late to be effective. Importantly, the lack of a vaccine or anti-viral treatments for COVID-19 has put the U.S. in a similar circumstance to 1918. This concept is vividly demonstrated by an analysis of response time of public health community interventions versus excess deaths from major U.S. cities in 1918:

Figure 1. Scatterplot of Public Health Response Time for 43 US Cities From September 8, 1918, Through February 22, 1919



The 4 cities represented by black circles are discussed further in the text. The 2 cities represented by blue circles are outliers chosen to demonstrate that the associations shown are not perfect. The Spearman rank correlation coefficient was used.

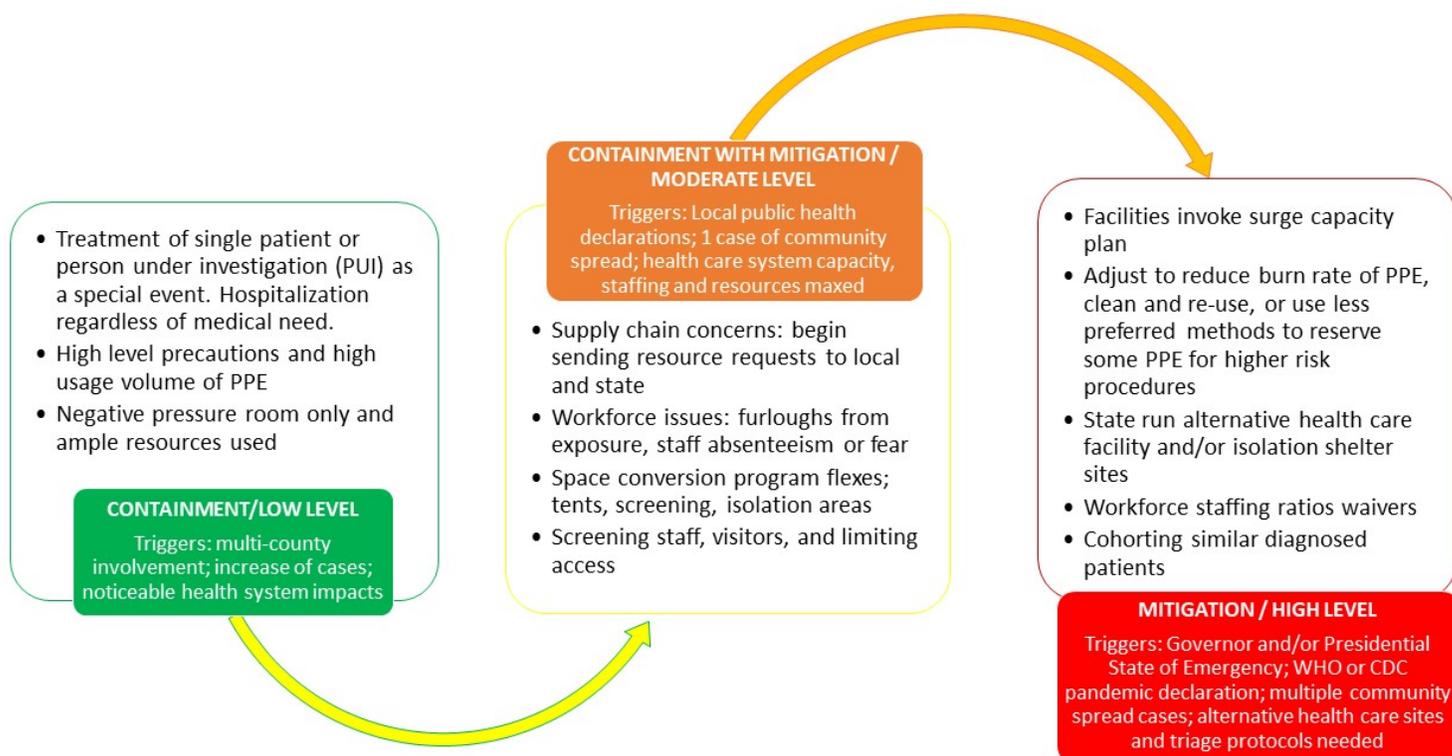


Given that laboratory testing has not been available for widespread testing, and the case definition for testing was initially very restrictive and did not allow for testing for community spread, the reality is that infection already exists in many California communities but has been undetected because the vast majority of cases have a mild spectrum of illness. Therefore, the window for maximum impact of community interventions may have already passed in some communities. The movement to mitigation also signals the need to further engage the healthcare delivery system to prepare for a rapidly rising number of cases.

Containment to Mitigation Continuum

The strategies differ in each phase of response to an outbreak. Initially during an outbreak of any viral or bacterial strain, the goal is to contain it as much as possible. Actions taken under the containment phase may seem extraordinary or excessive to normal medical protocols and procedures, but they seek to stop the spread. Once the virus has demonstrated the ability to spread through a community, the health care delivery system then must shift its response activities to both contain the virus and prepare for mitigation of large-scale healthcare system impacts. It is this preparation to preserve space capacity, supply chain, and the staffing workforce that determines the health care facility's ability to handle the incoming healthcare needs during mitigation. This continuum is best described by the graphic below, which shows the potential triggers (catalysts) for health care facilities to shift and move to the next form of response.

HEALTH CARE SYSTEM CONTAINMENT TO MITIGATION CONTINUUM



Health Care System Mitigation: Key Considerations

- **SPACE:** Expand health care system surge capacity by using community sites (such as stadiums, gyms, churches, federal/state properties, community centers, etc.) as temporary government run health care facilities and/or isolation shelters.
- **STAFFING:** Recruit traveling, temporary staff and grant immediate California medical and licensure privileges; expand/alter scope of practice of RNs, LVNs, MAs and CNAs, as well as providers like NPs and PAs. Adjust staffing ratios in population based care settings and consolidate patients in cohorted spaces.
- **SUPPLIES:** Mitigate scarce resources through proper re-use, using expired or other mask models, and rationing supplies like personal protective equipment (PPE) to ensure the most high-risk situations for spread (i.e., aerosol-generating procedures) have the proper PPE to protect healthcare workers. Procure gurneys, IVs and other medical supplies for mass government run facilities now, so they are at the ready when it is time.
- **INFECTION CONTROL:** Provide “just in time” training for all levels of staff and adjust guidelines for specific facility types and supply chain situations.
- **COMMUNICATION:** Educate the public on patient triage systems in individual communities to guide infected individuals to the right level of care including: 1) self-isolation, 2) admission to local isolation shelter or state run health facility, and 3) hospitalization.
- **PARTNERSHIPS:** Develop partnerships between stakeholders, facilities, industries, and states to provide opportunities for mutual aid. Partner with local media to help educate the public on that community’s triage system for symptomatic individuals.
- **LABORATORY TESTING:** Testing strategies during the shift from containment to mitigation initially focus on tracking the increasing number of infected individuals to determine when the health care system should rapidly increase their capacity. As the virus becomes widespread, testing becomes clinically focused and many patients will be presumed to be positive, similar to the peak of influenza season.
- **MEDICAL COUNTERMEASURES (MCM):** Work with health care delivery systems to procure, store, transport, and administer life-saving drugs, ventilators, other medical resources, and vaccines for COVID-19 as they become available.
- **MITIGATION STRATEGY BY PANDEMIC SEVERITY:** Each community or county may be in a different phase of the pandemic compared to a neighboring community, so it is imperative for each region to focus on mitigation steps specific to the phase they are experiencing.

II. Health Care Delivery System

Facility Capacity Management

General Considerations

Because it is unclear when California will reach the peak of the pandemic, the state needs to continue to identify and prepare for the number of hospital beds that may be needed as new infection rapidly increase over the coming weeks and months. Given that the health care system is already impacted by the current influenza season, this represents increased strain on the system. Reports from Italy's healthcare delivery system suggest that hospitals must prepare for rapid surge needs for ICU beds including making plans to convert operating rooms and other spaces to ICUs. Importantly, this surge will occur in the context of many hospitals already operating at or above capacity with overcrowded Emergency Departments (EDs) due in part to the demands of homelessness, behavioral health needs, and the opioid epidemic.

The increased demand for health care associated with a large novel coronavirus outbreak will require effective partnership across government and the entire continuum of health care, from hospitals to primary care, and must include cooperative strategies across our complex healthcare system. The likelihood that the impact will disproportionately burden certain regions of the state must also be anticipated, and plans made to shift patients and resources accordingly to ensure the entire state's healthcare delivery system remains strong.

Expansion of Health Care Capacity

The increased demand for health care should be addressed through a multifaceted approach, including expansion of existing hospital capacity, and expansion of the continuum of health care, and through the establishment of government-run alternate care sites, which may include state-run hospital facilities. Over the past several years, hospitals have been planning for increased capacity in the event of a public health emergency, with the assumption of the need for 15-20% immediate bed availability; however, most urban hospitals in the state have far less surge capacity. **Health care facilities need to enact their surge plans now** to create overflow space for screening, triage, isolation, and transfer/discharge, including conversion of outpatient space for inpatient use and using non-patient areas for patient care. In addition, facilities need to immediately implement patient education, phone advice, and treatment and triage algorithms to minimize unnecessary emergency department visits and admissions. Facilities also need policies and procedures to route patients with symptoms who may need testing away from congested emergency rooms, urgent care centers and clinics to locations (labs, community testing centers, etc.) where testing can be done without putting vital health delivery system assets at risk for undue infection burden.

Hospital surge plans are enacted in stages. The first step is to free up regular medical/ surgical beds and then to use program flexes to further expand the number of regular and ICU beds. As facilities across the state begin to report that they are at their bed capacity even with program flexes in place, and there is no ability to move patients to facilities within the region or the state, facilities will need waivers from both state and federal statutes to deliver additional patient care under modified conditions according to their surge plans. Because this situation will likely escalate quickly, potentially within hours or days, hospitals must solidify their plans now based on the most extreme potential numbers, not conservative estimates. This will ensure hospitals and local healthcare systems are prepared for a worst-case scenario. The State of California, and specifically the regulatory entities within Health and Human Services Agency, stand ready to assist and partner with healthcare facilities in this effort.

Health care facilities are well-versed in the ability to request program flexes to address health care needs in their facilities and routinely request such flexibilities during severe influenza seasons or during other local or state emergencies. CDPH has created a centralized structure through the Medical Health Coordination Center (MHCC) to quickly grant individual facility program flexes within 24 hours to allow triage of patients within tent structures on hospital property. As the impact worsens, CDPH will grant blanket program flexes to more quickly allow facilities to waive provisions of state regulations.

CDPH continues to monitor health care system capacity. Health care facilities should reach out to their Medical and Health Operational Area Coordinator to request resources from the county, region, state or federal government as needed. In addition, facilities should reach out to the Licensing and Certification District Office when they experience issues with their ability to deliver care or cannot meet the demand for care.

Large health care systems must develop plans now to expand care delivery for extreme surge capacity and work with the state with any identified barriers in staffing, capacity, or supplies and equipment. Additionally, sharing real-time creative solutions during this rapidly evolving pandemic will need to happen quickly among key leaders of large health care systems and public health.

The State of California recognizes that state and federal statutes will need to be waived when health care facility needs go beyond regulatory changes and require higher level modifications to existing laws governing care delivery such as scope of practice, movement between systems of care, transfer of patients, EMTALA, medical licensing of retired inactive or outside of California clinicians, use of supplies and equipment beyond manufacturer's recommended use, Medicaid or Medicare requirements, and liability and immunity protections, among others.

Expansion of Complementary Non-Hospital-Based Care

In order to relieve demands on hospitals, care will need to be augmented with additional outpatient services. Clinic hours may need to be extended to address patient needs. Long term care facilities may need to expand their role and accept additional patients who are discharged from the hospital but not yet able to go home. It is imperative that all health care providers, in all facility types, collaborate regionally to address any barriers to providing care and establish additional designated areas for care. Similar to hospital preparations, outpatient clinics need to repurpose their space and operations in order to meet the extreme estimates of patients needing treatment, not conservative estimates.

Establish Screening Areas

In order to reduce exposure at the health care facility while safely and quickly assessing patients to determine the level of care needed, implement the following:

- Establish separate screening areas, either on the health care facility property or in the community.
- Cohort patients in the screening area during assessment; screening areas for COVID-19 do not have to be a private room.
- Use the precaution level that is recommended by your institution.
- PPE must be changed between patients.
- Provide a 6 foot distance from other patients with reasonable privacy considerations.
- Record each patient screening with appropriate medical record documentation.
- Depending on the medical screening determination, transfer patient to 1) self-isolation at home, 2) centralized isolation shelter/urgent care facility; 3) hospital for admission.

Facility Access

In order to minimize unnecessary exposures, establish Safety Checkpoints at all portals of entry with the following provisions:

- Access to the medical facility should be limited to main portals of entry.
- Staff should be stationed at main portals of entry to conduct screenings.
- Patients who have a cough or shortness of breath should be directed to put on a mask before they are directed to the appropriate screening area.
- Visitors should be limited to one person, whether accompanying a patient to an appointment, or visiting a patient who is hospitalized.
- Restrict individuals with symptoms of upper respiratory infection from visiting.
- Instruct visitors and caregivers to wear a mask when outside the patient room and to clean hands before entering and leaving the patient room.
- Discourage visitors and caregivers from public locations within the medical facility (e.g. waiting room, cafeteria).

Move to Population-Based Care

During this pandemic, the demand for medical care will quickly exceed available resources to deliver that care. When staffing, supplies, and beds are scarce, the goal of health care becomes population-based care rather than individual care. Population based care means that resources are used to do the greatest good for the greatest number rather than providing all resources needed to treat each individual. Physicians will need to balance the obligation to save the greatest possible number of lives against the need to care for each individual. CDPH will work with experts to provide guidance on how to deliver care to ensure that ethical principles guide decisions to withdraw or withhold care.

Long Term Care Facilities Transfer/ Readmit/ Discharge Considerations

Patients with confirmed or suspected COVID-19 should not be sent to a long term care facility via hospital discharge, inter-facility transfer, or readmission after hospitalization without first consulting the local public health department. This will prevent the introduction of COVID-19 into a highly vulnerable population with underlying health conditions in a congregate setting. As discussed above, as the pandemic rapidly progresses, it will be necessary to designate certain long term care facilities as receiver sites for those with confirmed or suspected COVID-19; this would constitute community cohorting of COVID-19 patients requiring long term care but not hospital-level care. Regional healthcare systems should begin planning for this community-level cohorting now, as part of their overall triage system to direct individuals to the right level of care.

Emergency Medical Services (EMS)

Ambulance personnel should follow CDC guidelines for personal protective equipment (PPE). EMS personnel should have a designated area to doff their personal protective equipment and clean their ambulance between patients.

Medical facilities that have outside or specialized screening areas should direct EMS personnel to those locations for patient transport. Medical facility staff should meet ambulance personnel at a designated location outside the medical facility. The medical facility staff member should escort the patient and any accompanying family member to a designated COVID-19 evaluation and assessment area within the facility. When direct admit is possible, the patient and accompanying family member should be escorted to the designated inpatient setting.

Contingency plans for delays in ambulance transfer to receiving facility should also be made.

Health Care Workforce

Perhaps the most challenging aspect of expanding health care capacity during a pandemic is staffing. There will be shortages in the health care workforce as some workers become ill or are taken off duty because of exposure to individuals testing positive for COVID-19, while others may be fearful to come to work, need to care for sick parents or children, or have issues with childcare.

In addition, school closures can create a health care workforce shortage in a region, as it may result in health care staff needing to stay home to care for family members rather than being available to treat patients. Health care facilities need to develop back up staffing plans and may need to work with the Department of Social Services (DSS) to create provisions for onsite child care that meets DSS safety standards.

Because this is a national and global outbreak, securing mutual aid may be a significant challenge. Health care systems should use normal augmentations such as registries or increasing contract staff but as the need grows, this will likely be inadequate.

Health care facilities may need to rely on Medical Reserve Corps, volunteer staff, and even family members to assist with care. Facilities will need to examine administrative procedures to bring on staff quickly and determine both licensing, credentialing and privileging.

Health care facilities will need to work with the state to explore expanding scope of practice for licensed practitioners based on skill and experience and under the supervision of higher-level clinicians. Acute health facilities may also consider expediting credentialing for additional clinicians in the community that do not have hospital/admission privileges.

For non-patient care administrative staff, health care facilities should implement general recommendations for workplace social distancing, including flexible work sites (e.g. telecommuting), flexible work schedules (e.g. staggered shifts), replacing in-person meetings with teleconferences and restricting non-essential travel.

COVID-19 Patients and the Health Care Worker

If there is an exposure of an employee to a COVID-19 patient, the employee should self-monitor for symptoms of fever and a lower respiratory tract infection. If the employee does not have symptoms of fever or respiratory tract infection, the employee may continue to work. If the employee experiences any symptoms of fever and lower respiratory tract infection, they should be tested for influenza and COVID-19 and furloughed according to the same practices used for influenza during flu season. If the employee tests positive for COVID-19, follow guidance on criteria to determine when the employee may return to work.



Supply Chain

CDC and the World Health Organization are already reporting global shortages of critical supplies and equipment, in particular, of personal protective equipment (PPE) needed to ensure the safety of health care workers and in some cases the public.

To limit numbers of exposed health care workers and conserve PPE supplies, facilities should:

- Use dedicated or disposable patient-care equipment (e.g., blood pressure cuffs, stethoscopes).
- When facilities use reusable equipment, they must clean, disinfect, and sterilize (if needed) after use and according to manufacturer's instructions.
- Re-use masks and respirators by doffing, storing and cleaning correctly.
- Use expired surgical masks and N95 respirators and/or non-medical grade N95 respirators as a last resort if all other N95 supplies are exhausted.
- Minimize patient transfers to reduce opportunities for contamination both internally and externally.
- Triage areas for evaluation of persons presenting with fever and acute respiratory symptoms.
- Create entire units within the facility to care for hospitalized persons with suspected or confirmed COVID-19 infection.
- Have dedicated health care workers who practice extended use, reprocessing, and reuse of PPE, including respirators and eye protection.

Facilities should review CDC's PPE optimization strategies, available at <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/index.html> including options for extended use, reprocessing, and reuse of the various PPE components given current shortages of PPE. Extended use refers to the practice of wearing the same N95 respirator and eye protection for repeated close contact encounters with several different patients, without removing the respirator and eye protection between patient encounters. Health care workers should remove only gloves and gowns and perform hand hygiene between patients. This is typically done where multiple patients with the same infectious disease diagnosis are cohorted in the same area of the facility.

Facilities currently facing a shortage of N95 or other supplies, should contact their Medical Health Operational Area Coordinator (MHOAC); a MHOAC contact list is available at <https://emsa.ca.gov/medical-health-operational-area-coordinator/> and the MHOAC Program Manual at <https://www.cdph.ca.gov/Programs/CCLHO/CDPH%20Document%20Library/MedicalandHealthOperationalAreaCoordinationManual.pdf>



Infection Control

Source Control: Additional Patient Considerations

Patients with minimal symptoms should be advised to home isolate and work restrict until well (resolution of fever for 24 hours, resolution of cough). These patients do not require testing. Evaluation by phone or video visit should be encouraged. Patients presenting to a medical facility with cough or shortness of breath should be immediately advised to wear a mask.

Personal Protective Equipment (PPE) and Isolation and Environmental Cleaning: General Considerations

Recommended PPE should be donned and doffed appropriately for patients suspected or confirmed to have COVID-19. Negative pressure rooms are not required for all suspect and confirmed COVID-19 patients but staff should at minimum take droplet precautions for any patients with respiratory symptoms while being evaluated and treated. During procedures or when providing treatment to critically ill COVID-19 patients, N95 respirators and other PPE should be used.

Those escorting patients with respiratory symptoms or suspected to have COVID-19 do not need to wear a mask, if the patient is masked. If the patient is unable to wear a mask, staff must put on a mask while escorting. Staff must wear full PPE if in direct contact (touching or providing care) with patients during transport.

- PAPR/CAPR or N95 Use and Additional Equipment:
 - Clean reusable components of PAPR/CAPR after each use.
 - Dispose of N95 after each use as per current infection prevention protocols.
 - Use disposable supplies if available; otherwise dedicate reusable supplies or equipment for patients suspected or confirmed to have COVID-19.
 - Reusable equipment must be cleaned routinely with hospital-approved disinfectant.
 - Rooms occupied by patients suspected or confirmed to have COVID-19 should be cleaned following protocols for routine daily and discharge cleaning.
 - Environmental services (EVS) should follow at minimum droplet and contact precautions with eye protection while performing daily and discharge protocols for cleaning of rooms occupied by patients suspected or confirmed to have COVID-19.
 - In general, rooms of discharged patients suspected or confirmed to have COVID-19 on droplet precautions need not be closed for 1 hour prior to cleaning. The exception is negative pressure rooms used by patients suspected or confirmed to have COVID-19 on airborne precautions due to aerosol-generating procedures; these must be closed for at least 1 hour prior to cleaning. However, the room may be cleaned without waiting for 1 hour if EVS staff wear a properly fitted N95 respirator.

- Initiate Airborne Precautions and wear PAPR/CAPR/N95 if performing or present in the room for high-risk procedures (intubation, bronchoscopy, sputum induction, suctioning, opening ventilator circuit, etc.) on patients suspected or confirmed to have COVID-19.
 - If available, perform high risk procedure in a negative pressure room; otherwise, a private room with closed door is adequate.
 - Conversion of rooms to negative pressure as possible
 - Limit high-risk procedures when impact to care is less obvious, i.e., nebulized medications without firm objective need, bronchoscopy when blind lavage will do, etc.

- Limit transport and movement of patients to medically necessary purposes.
 - Use alternative bedside procedures and imaging when possible.
 - Patient must be masked if ambulating outside the room or being transported for a procedure.
 - Staff need not wear mask or other PPE if patient is wearing mask during transport.

- Avoid unnecessary testing and routine periodic evaluation of patients in isolation
 - Decrease vital sign assessments to medically appropriate intervals to match clinical condition and improvement in condition.
 - Testing and imaging only when needed for clinical indications (e.g. diuresis, clinically evident bleeding, change in urine output, change in tidal volumes, oxygenation, etc.)
 - Utilize alternative diagnostic methods rather than resource- and staff-intense methods when appropriate (point of care ultrasound, etc.)

- Use remote interaction with patients in isolation as appropriate
 - 2-way intercom or phone
 - “Baby monitors” or other video monitors may suffice if patients unable to communicate
 - Remote telemonitoring equipment if available

Cohorting of COVID-19 Patients

- Patients with the same known respiratory disease/condition other than COVID-19 may be cohorted with local IP/ID guidance.
- Patients confirmed with COVID-19 may be cohorted with local IP/ID guidance.

Reusable Equipment and Environmental Cleaning

- Use disposable supplies if available; otherwise dedicate reusable supplies or equipment for patients suspected or confirmed to have COVID-19.
- Reusable equipment must be cleaned routinely with hospital-approved disinfectant following each use.



Visitation Restriction

Social distancing measures that decrease the amount of interaction between people can reduce virus transmission by decreasing the frequency and duration of social contact among persons of all ages. Social distancing should include medically screening visitors, limiting visitors, and possibly restricting visitors. It may also include restricting access to common areas like a recreation room, the cafeteria, and canceling outings and classes.

These measures can be common-sense approaches to limiting potential symptomatic and asymptomatic individual contact between people, which reduces person-to-person transmission; however, it can also quickly result in a decline of the patient's overall mental health. Isolation measures of this magnitude may save lives, but it is important to note that anxiety, depression and other mood disorders could ensue from this level of social isolation.

Removal of Remains

Mortuary and funeral home workers should always follow good biosafety practices. When handling human remains with known or suspected COVID-19 infection, workers must be protected from exposure to infected blood and body fluids or to contaminated objects and surfaces. Employers are responsible for following applicable OSHA requirements. Workers should use standard precautions to ensure protection from body fluids splashing or contaminating eyes, mouth, nose, hands or clothing.

At a minimum, mortuary workers should:

- Wear latex or nitrile, nonsterile gloves when handling potentially infectious materials.
- Wear heavy-duty gloves over the latex/nitrile gloves if there is a risk of cuts, puncture wounds or other injuries that break the skin.
- Wear a clean, long-sleeved fluid-resistant or impermeable gown to protect the clothing.
- Use a plastic face shield or a surgical mask and goggles to protect the face, eyes, nose and mouth from potentially infectious body fluids if there is a risk of splashing. If there is a risk of aerosol generation while handling human remains, use respiratory protection as specified in the OSHA general guidance.

Prompt cremation of remains from COVID-19 cases can avoid worker exposure. Embalming is allowed but an open casket should be discouraged to prevent mourners from touching the body.

III. Communications

There are over 11,169 health care facilities in over 30 different facility types in California that are licensed by CDPH, which underscores the challenges of consistent and timely communication. Note that this does not include the Veterans' Affairs health care system. In addition, there are thousands of other facilities like urgent cares, clinics and other ancillary health care facilities that are not licensed by CDPH.



CDPH will continue weekly All Facility Calls (AFCs) and add ad hoc AFCs or increase regular frequency as needed. CDPH will also continue weekly and ad hoc All Facility Letters (AFLs) with increased frequency as needed. CDPH will continue updating the CDPH web site for important updates and develop a more robust social media and radio presence. Most importantly, CDPH leadership will continue to keep the lines of communication open between health care facility leadership and stakeholders who represent the members of facility types, and be available and responsive to their evolving situational needs.

Similar to other pandemics, COVID-19 is not a singular event – it is a series of occurrences at different times, in different communities, over a sustained period of time. Messaging must be grounded in risk communication principles and based on the time and location of the events. The public must be informed about the potential threat, kept up to date in an environment of uncertainty, and provided relevant and usable information in a transparent manner. Additionally, health care providers and response personnel must be kept abreast of best practices, availability of resources and methods to ensure appropriate public care and safety. The effective use of crisis and emergency risk communication principles can help instill and maintain public confidence in the state and national public health system.

Recommended best practices include:

- Develop strategic public and stakeholder communications plan, adapting to the evolving situation.
- Identify credible spokesperson across multiple languages as needed.
- Develop and disseminate clear, plain-language COVID-19 communications, adapting messaging as the situation develops and evolves.
- Translate messaging to reach targeted and culturally appropriate populations.
- Utilize appropriate methods of communications, particularly social media and video messaging, to share information as it develops. Correct misinformation.

Public and Patient Outreach

Public Service Announcements with generalized recommendations about COVID-19 can serve as a useful tool to provide direction to patients to community screening areas and isolation shelters. It is important that the public has access to information about COVID-19 across all technological platforms. Outreach to the public can educate them on what to expect at screening and how to safely access care.

Communications should be developed to inform patients with potential infection to call first, before presenting to a clinic setting, and to visit a screening area first. All communication materials should be available in ADA compliant format in multiple languages as appropriate. Focus communications on the patient demographics who are at the highest risk and seek



communication avenues that reach the target audiences who are the most vulnerable to COVID-19.

Physician and Staff Education

Key groups to include in educational efforts include:

- Appointment and advice call center staff who field a variety of questions will require the development and training on FAQs.
- Front office and administrative staff need training on COVID-19 to reduce fears and enable them to properly handle suspected cases.
- Physicians should be familiar with triage workflows so they understand the new patient pathways through the health system and can refer patients appropriately.
- Physicians will need updates on reporting, epidemiology and outbreak information for their community and how to communicate with their local health department.
- Clinic directors will need timely information about business operations, staff and supply availability and what regulatory flexes are available.

IV. Laboratory Testing

There are 4 categories of lab testing: state public health lab diagnostic testing, local public health lab diagnostic testing, surveillance testing (by CDC or local public health lab), and commercial tests (multi-viral panels and point-of-care (POC) COVID-19 testing similar to POC flu tests).

As the pandemic progresses, public health labs will transition from testing all suspect cases to mostly testing for new COVID-19 strains; similar to influenza testing for virus mutations, testing will likely be conducted in outbreaks or high-risk or high-exposure settings, and specific instances (those re-infected with COVID-19, those in ICU, death). Like influenza surveillance for virus mutations, public health labs should plan for some form of surveillance testing for variant COVID-19 strains.

Criteria for Clinical Testing

Criteria for testing will continue to shift as the pandemic cycle follows its course. Hospitals and clinics should promulgate clinical guidelines for who should be tested regardless of federal guidelines. This may include:

- Patients who present with an influenza like syndrome (fever, cough, malaise)
- Patients who have a severe lower respiratory illness (pneumonia, ARDS) without another clear etiology
- Patients who have mild symptoms but are in close contact with individual(s) at high risk for complications of COVID-19

The need for testing diminishes once the community is saturated with cases. At that point, the focus on resources should be treatment for the patient. If a vaccine or other medical counter measure becomes available, then the need for testing will increase again.

Methods of Testing

CDPH encourages health care facilities to provide quick testing methods that reduces the amount of exposure to the facility. Designated “Drive By” testing locations on hospital or clinic property space is encouraged as to not bring in suspected or ill patients into the interior of the property. Staff conducting testing in these outdoor or tent screening environments should still follow proper PPE and infection control guidelines.

Mandatory Reporting

Commercial or POC testing results should be transmitted via Electronic Lab Report (ELR) to public health, which is normally used for other diseases including influenza. This automates the process of tracking new positive cases. Laboratories that are not yet participating in ELR should report to

their local health department. Clinicians are currently also mandated to report to their local health department per Title 17, Section 2500.

V. Medical Counter Measures (MCM)

In the context of the public health response to COVID-19, medical counter measures (MCMs) refer to FDA-regulated products used to prevent or treat the virus, including vaccines, antiviral medications for treatment or post-exposure prophylaxis (as used in influenza and HIV), and biologics (such as intravenous immunoglobulin used in measles and rabies). Additional supportive medical devices may also be needed such as ventilators or other respiratory or equipment support.

At this juncture, there are several groups actively working on developing a vaccine. Researchers are also testing a new antiviral under development (remdesivir), which can be requested on a compassionate use basis, as well as the efficacy of existing antiviral and anti-inflammatory agents. CDPH partners closely with the CDC to stay abreast of research on both vaccines and treatments, and will be developing a statewide plan to coordinate the distribution of any future vaccine via an algorithm that prioritizes high risk groups and critical responders. CDPH will work with the health care delivery system to procure, store, deliver and administer vaccines and drugs as needed.

VI. GLOSSARY

Containment	Efforts made to prevent introduction of virus into a population including travel restrictions, quarantine of those with exposure, immediate isolation of new cases, aggressive contact tracing, etc.
Coronaviruses	A family of viruses known to cause a variety of diseases including the common cold, Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS); when the virus mutates it can jump from animal to human hosts.
COVID-19	The name CDC adopted for the disease caused by SARS-CoV-2, the name of the novel coronavirus.
Mitigation	When it is recognized that widespread community transmission exists, and containment is ineffective, activities shift to lessening burden on healthcare system, protecting those most at risk, specific outbreak control, and slowing spread within populations.
N95 respirator	Respiratory protective device designed to achieve a very close facial fit and very efficient filtration of air borne particulars, the N95 designation means the respirator blocks at least 95 percent of very small particles (0.3 micron).
SARS-CoV-2	CDC adopted this as the scientific name of this novel coronavirus because it is closely genetically related to the corona virus that caused SARS.
Personal protective equipment (PPE)	Supplies such as masks, respirators, eye protections such as goggles and face shields, gowns and gloves, and other supplies that protect the healthcare workforce caring for infectious persons, first responders, and field staff.
Point of Care Testing (POC)	Medical diagnostic testing at or near the point of care.
R-naught (R_0)	Basic reproductive number; the average number of new infections caused by a typical infectious individual in a wholly susceptible population.
Strategic National Stockpile	The U.S. National repository of supplies including medical supplies such as antibiotics, vaccine, and personal protective equipment.
Population-based care	Resources are used to provide the greatest good for the greatest number rather than provided all resources needed to treat each individual; some may not receive care.